

CLAIMS

We claim:

1. A fuel cell system comprising:

a fuel cell connected to a load to supply power thereto;

5 a voltage regulating unit connected between said fuel cell and said load for controlling a voltage between the terminals of said load;

a rectifier, which is connected to said fuel cell side from the connection portion with said voltage regulating unit, and which is between said fuel cell and said load, for preventing the reverse flow of a fuel cell current; and

10 a current sensor for detecting a fuel cell current, wherein output of said current sensor after the voltage between the terminals of said load has been raised is detected by said voltage regulating unit, and correction value of the fuel cell current detected with said current sensor is determined based on the detected current sensor output.

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2. The fuel cell system according to claim 1, wherein

the increase in the voltage between the terminals of said load by said voltage regulating unit is carried out once after the voltage has been decreased from the generation termination voltage of said fuel cell.

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3. The fuel cell system according to claim 2, wherein

the interval from the decrease in voltage between the terminals of said load from the generation termination voltage of said fuel cell to the increase of said voltage by said voltage regulating unit is 50 msec or more.

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4. The fuel cell system according to claims 1 to 3, wherein

the increase in the voltage between the terminals of said load by said voltage regulating unit is conducted up to the generation termination voltage of said fuel cell.

5 5. The fuel cell system according to any of claims 1 to 3, wherein
 said correction value is determined based on an average value of the
 output of the current sensor within a fixed interval after the voltage between the
 terminals of said load has been raised by said voltage regulating unit.

10 6. The fuel cell system according to any of claims 1 to 3, comprising a
 voltage comparison unit for comparing a voltage between the terminals of said fuel
 cell with a voltage between the terminals of said load, wherein
 the correction value of the fuel cell current detected with said current
 sensor is determined based on the output of said current sensor within an interval
15 in which the voltage between the terminals of said fuel cell is lower than the voltage
 between the terminals of said load.

 7. The fuel cell system according to any of claims 1 to 3, wherein
 said voltage regulating unit comprises a DC voltage converter, and a
20 battery is connected to said DC voltage converter.

 8. A method of correcting a fuel cell current detected with a current
 sensor of a fuel cell connected to a load for supplying power thereto, comprising
 the steps of:

detecting the output of said current sensor after a voltage between the terminals of said load has been raised, while preventing the reverse current flow from said load side to said fuel cell side; and

determining a correction value of the fuel cell current detected by said
5 current sensor based on the detected output of the current sensor.

9. The method according to claim 8, wherein
the increase in the voltage between the terminals of said load is
carried out once after the voltage has been decreased from the generation
10 termination voltage of said fuel cell.

10. The method according to claim 9, wherein
the interval from the decrease in voltage between the terminals of
said load from the generation termination voltage of said fuel cell to the increase of
15 said voltage is 50 msec or more.

11. The method according to any of claims 8 to 10, wherein
the increase in the voltage between the terminals of said load is
conducted up to the generation termination voltage of said fuel cell.
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12. The method according to any of claims 8 to 10, wherein
said correction value is determined based on an average value of the
output of the current sensor within a fixed interval after the voltage between the
terminals of said load has been raised.
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13. The method according to any of claims 8 to 10, wherein

the correction value of the fuel cell current detected with said current sensor is determined based on the output of said current sensor within an interval in which the voltage between the terminals of said fuel cell is lower than the voltage between the terminals of said load.